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Volume 2: Case Flow Model User's Guide

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RAILROAD CASH FLOW MODEL
SOFTWARE DOCUMENTATION

VOLUME 2

CASH FLOW MODEL USER'S GUIDE

January 1982

U.S. Environmental Protection Agency
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This volume of the railroad cash flow software documentation describes the use of the railroad cash flow model. It tells how to access the model and how to change the data. Section 2.1 provides a brief overview of the design of the cash flow model and the computing environment it is used in. Section 2.2 describes how to access the computer and run the model. Section 2.3 shows how to change the data. Section 2.4 is a sample output. Appendix A is a sample session with the cash flow model. Appendix B is a list of key commands which can be used on the WYLBUR system. Appendix C explains how to restore files which have been archived.

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VOLUME 1

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VOLUME TWO

RAILROAD CASH FLOW MODEL USER'S GUIDE

This volume of the railroad cash flow software documentation describes the use of the railroad cash flow model. It tells how to access the model and how to change the data. It is recommended that the user also read the WYLBUR guide which will aid in understanding this guide. Section 2.1 provides a brief overview of the design of the cash flow model and the computing environment it is used in. Section 2.2 describes how to access the computer and run the model. Section 2.3 shows how to change the data. Section 2.4 is a sample output. Appendix A is a sample session with the cash flow model. Appendix B is a list of key commands which can be used on the WYLBUR system. Appendix C explains how to restore files which have been archived.

2.1 Overview of WYLBUR and the Cash Flow Model

A brief description of the Environmental Protection Agency's Washington Computer Center's (WCC) WYLBUR operating system and the design of the railroad cash flow model will make the operation of the model (presented below) more clear. WCC uses an operating system called WYLBUR in which one can edit files and programs at the terminal in an interactive mode. To actually run a program, however, one must submit the program to the system and then wait. The program is placed in a queue with other programs (these are known as jobs) and the computer runs one at a time. One can change the parameters and data used by the cash flow model interactively, but one must run the model in a batch mode. As a result, one cannot change model parameters while the program is running.

Another important feature of the WYLBUR system is the concept of a workspace. A workspace is a temporary storage area in which the user can edit files. Only one file may be introduced into the workspace at a time. To preserve one's editions of a file permanently, one must save the edited file by writing it onto the computer's disk. Saving an edited file destroys the old version of the file if it is stored under the same name. Multiple versions of a file can be preserved, however, by saving each version under a different file name. If one does not save a new version of a file, it will be lost when one leaves the system or introduces a new file to the workspace.

Because WYLBUR does not allow inputs to be changed interactively, a user must modify the key financial parameters if he/she wants to do so before the program is run. These parameters are stored in a data file. In order to avoid the problems which arise when archival files are changed while preserving the ability to make changes in data for experimental purposes, two versions of the data file containing key financial parameters have been set up for the cash flow model. The first is the archival version, which never changes. The second is an editable version of the file, which is stored under a different file name from the archival version and changes each time changes in the data are made. The contents of the editable version of the file can be restored to the archival version by writing the contents of the archival file over the contents of the editable file. This is done by instructing the computer to save the contents of the archival file under the name of the editable file. The mechanics of this process are presented in Section 2.3.2.

2.2 Accessing the Model

Instructions in Job Control Language which command the computer to run the railroad cash flow model are contained in a program called "CN.EPAJHV.S2KC.RUNCASH". To access this program, log onto the WYLBUR system of the EPA's Washington Computer Center (WCC).

Accessing the system consists of two steps:

1. getting through the telecommunications network to WYLBUR
2. logging on to WYLBUR

Step 1 is a fairly mechanical process and is described in flow-chart form (see Figure 1).

Note: . the flow-chart is not foolproof. For example, if you can't get the high-frequency tone in two tries, you should try again using another telephone number.

Configuration of the computer terminal:

Main power switch: ON

Modem power switch (if separate): ON

Mode: HALF DUPLEX

Baud rate: 300

Terminal mode: LINE

Note: <CR> means carriage return.

STEP 1

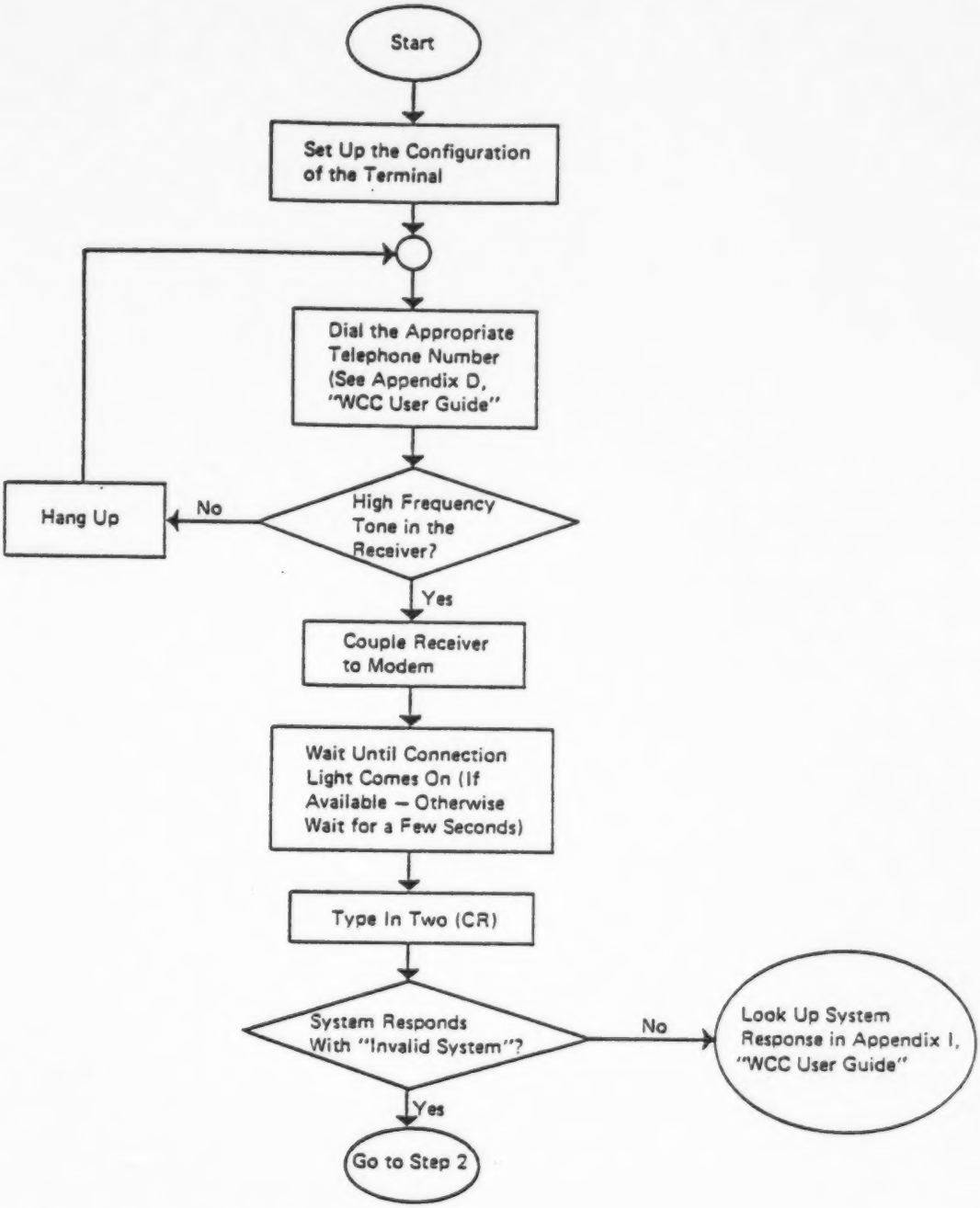
Start
Set Up the Configuration of the Terminal
Dial the Appropriate Telephone Number (See Appendix D, "WCC User Guide"
High Frequency Tone in the Receiver?
No
Hang Up
Yes
Couple Receiver to Modem
Wait Until Connection Light Comes On (If Available — Otherwise Wait for a Few Seconds)
Type In Two (CR)
System Responds With "Invalid System"?
No
Look Up System Response in Appendix I, "WCC User Guide"
Yes
Go to Step 2

Figure 1. Logging on to WYLBUR.

Step 2. If everything in Step 1 goes right, you should get the following message:

```
INVALID SYSTEM
WYL<CR>[1]
READY TO WCC ON sss[2]

ILLEGAL TERMINAL TYPE
<CR>
MODEL 37/38 TELETYPE

WYLBUR SYSTEM AT COMNET PORT xx  today  date  time[3]

USERID  ? EPAIII<CR>[4]
ACCOUNT ? AAAA<CR>[5]
PASSWORD? PPPPPPPP<CR>[6]

SPECIFY GLOBAL FORMAT FOR SAVE COMMANDS
REPLY - DEFAULT, EDIT, TSO, CARD, OR PRINT
FORMAT? CARD<CR>[7]
COMMAND?
```

You have just successfully logged onto the WYLBUR system. This ends Step 2.

---

[1] You want to log on to the WYLBUR system.
[2] 'sss' is the system number.
[3] 'xx' is the port number.
'today' is today's day of the week.
'date' is today's date.
'time' is the time you succeeded in logging on to WYLBUR.
[4] 'EPAIII' is your userid — check with your EPA project officer
[5] 'AAAA' is your user account code — check with your EPA project officer
[6] 'PPPPPPPP' is your password — check with your EPA project officer
[7] Choose one of the above formats

Once one has logged onto the system, the printer control must be set so that the output is 14 in. wide (132 characters). Otherwise, the output will wrap around lines wider than 8 in. and be unreadable. (A printer with 14-in. paper capability must be used.) Set the printer control width to 14 in. width by typing:

SET TERMINAL WIDTH = 132 <CR>

Access to CN.EPAJHV.S2KC.RUNCASH may be obtained by typing:

USE $CN.EPAJHV.S2KC.RUNCASH<CR>

> Note: If the computer responds by typing VOLUME? and you have typed the instruction properly, this means that the cash flow model is no longer available on-line. WCC has stored the cash flow software off-line because it has not been used in more than 2 months. The question VOLUME? asks where the software is located. See Appendix C for instructions on how to bring the software back on-line.

To run the cash flow model, type:

RUN NOTIFY<CR>

Notify instructs the computer to inform the user that the program has been run.

The computer will respond by typing:

XXXX IS YOUR JOB NUMBER.

where XXXX will be some three- or four-digit job number. Usually between 5 and 30 minutes pass before the program is

run. To determine whether the program has been run yet, type:

LOC XXXX

where XXXX is your job number. If the computer responds:

JOB XXX IN OUTPUT HOLD

then the job output is ready.

One can leave the system while waiting for the program to run. Instructions on how to leave the system are presented below.

Once the program has been run, one may fetch the output. This is done by typing

FETCH XXXX<CR>

where XXXX is the job number described above.

The computer will reply:

OK TO CLEAR?

This message asks whether the computer can empty the user's workspace to bring the job output in. In this manner, the system seeks to avoid destroying edited files one might wish to save.

The user should respond: YES<CR>

This will bring the cashflow output into the user's workspace.

To list the output, type:

LIST<CR>

The first 610 lines of output will be extraneous material generated by the computer and not relevant to the user of the model. To print out only the necessary output, type:

LIST 610/1500 CC UNN

which instructs the computer to print lines 610 to 1500 of the file, which includes all the relevant output. CC means to use the first character of each line as a carriage control. UNN means to print each line without its WYLBUR-generated line number.

To leave the system, type:

CLEAR TEXT<CR>

which clears the user's workspace, and then type:

LOGOFF<CR>

which terminates contact with the system.

Then hang up the telephone.

2.3 Changing the Data

A user may wish to change the data used by the model. This allows sensitivity analyses to be made on the effect of various financial parameters on firm cash flows, and allows data on regulatory costs to be changed. In this manner, the impacts of various regulatory options can be assessed.

2.3.1 Changing Scenarios

Cost data for the eight regulatory scenarios are contained in eight separate files as is shown in Table 2-1.

The program also requires net income forecasts for each firm before and after regulation for each scenario. These are contained in eight separate data files. Net income forecasts are provided for the years 1980-2010. The name of each data file is shown in Table 2-2.

As was noted above, the program which runs the cashflow model is called CN.EPAJHV.S2KC.RUNCASH (RUNCASH for short). To change the cost data, one must change the commands concerning cost data in RUNCASH. The first step is to bring RUNCASH into the user's workspace. Type:

USE $CN.EPAJHV.S2KC.RUNCASH<CR>

If the computer answers:

OK TO CLEAR?

Reply:

YES<CR>

The next step is to access the command which governs which cost data set is to be used. This is line seven of RUNCASH. Tne archival version of line seven of RUNCASH reads:

//GO.FT03F001 DD DSN=CN.EPAJHV.S2KC.PVCST1, DISP=SHR

TABLE 2-1

LOCATION OF COST DATA

SCENARIO		FILE NAME
I	(75,65)	$CN.EPAJHV.S2KC.PVCST1
II	(70,65)	$CN.EPAJHV.S2KC.PVCST2
III	(70,60)	$CN.EPAJHV.S2KC.PVCST3
IV	(65,65)	$CN.EPAJHV.S2KC.PVCST4
V	(65,60)	$CN.EPAJHV.S2KC.PVCST5
VI	(60,65)	$CN.EPAJHV.S2KC.PVCST6
VII	(60,60)	$CN.EPAJHV.S2KC.PVCST7
VIII	(55,60)	$CN.EPAJHV.S2KC.PVCST8

TABLE 2-2

NET INCOME FORECAST DATA FILES

SCENARIO		SUFFIX	FILE NAME
I	(75,65)	ONE	$CN.EPALYG.S2KC.CAST8ONE
II	(70,65)	TWO	$CN.EPALYG.S2KC.CAST8TWO
III	(70,60)	THR	$CN.EPALYG.S2KC.CAST8THR
IV	(65,65)	FOU	$CN.EPALYG.S2KC.CAST8FOU
V	(65,60)	FIV	$CN.EPALYG.S2KC.CAST8FIV
VI	(60,65)	SIX	$CN.EPALYG.S2KC.CAST8SIX
VII	(60,60)	SEV	$CN.EPALYG.S2KC.CAST8SEV
VIII	(55,60)	EIG	$CN.EPALYG.S2KC.CAST8EIG

"PVCST1" is an instruction which tells the computer to access the cost file containing data on Scenario I. To change the scenario, type:

CHANGE "PVCST1" to "PVCSTX"<CR>

where X is some scenario. For example, typing:

CHANGE "PVCST1" to "PVCST7"<CR>

will cause the computer to use cost data for scenario 7 (60,65).

The computer will respond by typing the new contents of line 7. This will look like:

//GO.FTØ3FØØ1 DD DSN=CN.EPAJHV.S2KC.PVCST7,DISP=SHR

When the cost data are changed, the net income forecast data must also be changed. The scenario used for the cost data must correspond to that for the net income data or the results will be meaningless. For example, PVCST7 must be used with CAST8SEV. Each of the eight sets of cost data is associated with a unique set of net income forecasts. The instruction which tells the computer which net income forecast data to use is located in line 8 of RUNCASH. Line 8 reads:

//GO.FT24ØØ1 DD DSN=CN.EPALYG.S2KC.CAST8ONE,DISP=SHR

where "CAST8ONE" is the specific instruction to use scenario one. To change scenarios, the "ONE" suffix on "CAST8" must be changed. The suffix which applies to each scenario is shown in Table 2-2.

As is shown in Table 2-2, net income suffixes are the first three letters of the number of the scenario they apply to. To change this suffix, type:

CHANGE "CAST8XXX" TO "CAST8YYY"<CR>

where:

XXX is the current suffix, and
YYY is the desired suffix.

For example, typing:

CHANGE "CAST8ONE" TO CAST8TWO"<CR>

will cause the computer to use net income forecasts from Scenario II instead of Scenario I.

Once both the cost data and net income forecast data have been changed, follow the sequence of instructions described in Section 2.2 to run the program. The contents of the RUNCASH model will be automatically restored to their archival version (Scenario I) once the workspace is cleared.

2.3.2 Varying Financial Parameters

Seven key financial parameters are used in the model. These are the number of firms, the time horizon of the project, the corporate tax rate, investment tax credit, discount rate, inflation rate, and the year noise abatement costs occur. This year is currently 1984. These key financial parameters are contained in the file:

CN.EPAJHV.S2KC.MISC

Current values, and the line of CN.EPAJHV.S2KC.MISC that each financial parameter appears on, are shown in Table 2-3.

As can be seen, the current time horizon of the project is 31 years, the corporate tax rate is 46 percent, the investment tax credit is 10 percent, discount rate is 11 percent, inflation rate is 8 percent, the construction year is 1984, and there are 40 firms.

These can be changed by accessing CN.EPAJHV.S2KC.MISC as follows:

USE $CN.EPAJHV.S2KC.MISC

To change the contents of any line, type:

REPLACE X<CR>

where X is some line number.

The computer will type back the line number followed by a decimal point. The user can then type the new value desired. The time horizon must be a two-digit integer (a number from 01 to 99). The corporate tax rate must be a decimal point followed by a two-digit number (.00 to .99), as must be the investment tax credit, discount rate, and inflation rate. The construction year must be a four-digit integer (a year). The number of firms must be a two digit integer (00 to 99).

For example, to change the number of firms, type:

TABLE 2-3

KEY FINANCIAL PARAMETERS IN $CN.EPAJHV.S2KC.MISC

LINE	PARAMETER	CURRENT VALUE
1	Number of Firms	40
2	Corporate tax rate	.46
3	Investment tax credit	.10
4	Discount rate	.11
5	Inflation rate	.08
6	Construction year	1984
7	Time Horizon	31 years

REPLACE 1<CR>

and then

XX<CR>

where XX is a two-digit integer representing the new number of firms.

Once necessary changes have been made, one must save the edited version of MISC. Because one does not want to destroy the archival version of MISC, one saves the editable version of the file. This is done by typing:

SAVE $CN.EPAJHV.S2KC.MISCEDIT CARD <CR>

Answer YES to the question: REPLACE?

> Note: Be sure to type MISCEDIT NOT MISC. If one accidentally writes over the archival version of MISC, one must restore it by bringing it into your workspace, replacing the incorrect data with the original data and saving it again. [SAVE $CN.EPAJHV.S2KC.MISC] If one is very confused, one may call WCC user support (immediately!) (800-424-9067), tell them what has happened, and they can restore the contents of the file.

Then, one can run the program following the steps outlined in Section 2.2.

After the program has run, one should restore values of the financial parameters in MISCEDIT to their archival values in MISC. Type:

CLEAR TEXT <CR>

to flush the RUNCASH model from the workspace.

Type:

USE $CN.EPAJHV.S2KC.MISC

and then:

SAVE $CN.EPAJHV.S2KC.MISCEDIT

to restore the editable version to its original contents. Then clear the workspace and continue the session.

The preceding section will be more clear if the user has read the WYLBUR GUIDE, available from the Washington Computer Center. A sample computer session is presented in Appendix A.

2.4 Model Outputs

The cash flow model produces six distinct sets of results. These results are very easily interpreted.

The first set of results, marked "A" on the attached copy of the model output, simply reproduces the key financial parameters used in the model. Each parameter appears below or next to its title. For example, .08 appears next to "Inflation Rate" indicating 8 percent inflation is assumed within the model. 40 appears below "Number of Firms" to indicate there are 40 firms in the sample set. Other parameters are the corporate tax rates, the investment tax credit, discount rate, time horizon and implementation year.

The next set of results, marked "B", in the attached copies of the output, are intermediate results of the analysis. These intermediate results include present

discounted values of the post-regulatory investment cost, operating and maintenance expenses, the tax savings because of depreciation, and cash flows under each of the three data sets described above. To save programming time, each firm was assigned a number. This number is printed instead of the firm's name. This number appears in the first column of output in each set of firm-specific results.

The correspondence of each firm to its number is shown in the list below:

1. Atchison, Topeka and Santa Fe
2. Baltimore and Ohio
3. Bessemer and Lake Erie
4. Boston and Maine
5. Burlington Northern
6. Chesapeake and Ohio
7. Chicago and North Western
8. Chicago, Milwaukee, St. Paul and Pacific
9. Chicago, Rock Island, and Pacific
10. Clinchfield
11. Colorado and Southern
12. Conrail
13. Delaware and Hudson
14. Denver and Rio Grande Western
15. Detroit, Toledo, and Ironton
16. Duluth, Misabe, and Iron Range
17. Elgin, Joliet, and Eastern
18. Florida East Coast
19. Fort Worth and Denver
20. Grand Trunk Western
21. Illinois Central Gulf
22. Kansas City Southern
23. Long Island Railroad
24. Louisville and Nashville
25. Missouri Pacific
26. Missouri-Kansas-Texas
27. Norfolk and Western
28. Pittsburgh and Lake Erie
29. St. Louis - San Francisco
30. St. Louis - Southwestern
31. Seaboard Coast Line
32. Soo Line
33. Southern Pacific
34. Union Pacific
35. Western Maryland

36. Western Pacific
37. Alabama Great Southern
38. Central of Georgia
39. Cincinnati, New Orleans, Texas Pacific
40. Southern Railway

For example, firm 1 is the Atchison, Topeka and Santa Fe. The present value of its investment costs are $41.074 million.

The next set of results, marked "C", is a firm-specific list of the net worth base used by the model. This net worth is a straight-line extrapolation of 1973 to 1978 trends in firm net worth to 1980. This extrapolation of net worth was made to allow for a realistic 1980 net worth to use in the model. Actual 1980 net worth data was not available.

The next set of results, marked "D", is quite large. It is a firm specific compilation of the net present value of future cash flows (DCF) before and after regulation. It also shows the change in DCF due to regulation. DCF is shown under all three assumptions about the basis for cash flows (historical, baseline forecast, and "profit-maximization" forecast).

The section of results marked "E" shows the most important results of the cash flow model. These are firm-specific ratios of DCF to NW under the three assumptions about cash flows. These ratios are for firms after compliance. Pre-compliance ratios can be obtained by running the model with zero compliance costs. Firms with an asterisk in their ratio columns had zero or negative net worth. As a result, the ratio of DCF to NW for these firms is meaningless.

The final set of results, marked "F", present firm-specific initial compliance costs. A total for all firms is shown at the bottom of the column.

The results attached are a sample run for illustrative purposes only and do not represent any of the regulatory scenarios.

NUMBER OF FIRMS: 40 | TIME HORIZON OF PROJECT: 31 | IMPLEMENTATION YEAR: 4

TAX RATE: 0.460 | ITC: 0.100 | DISCOUNT RATE: 0.110 | INFLATION RATE: 0.000

A

B

INTERMEDIATE RESULTS

FIRM	PRESENT VALUE OF INVESTMENT COST **********	PRESENT VALUE OF OPERATING MAINTENANCE **********	PRESENT VALUE OF DEPRECIATION **********	PRESENT VALUE OF CASH FLOW		
				HISTORICAL **********	BASELINE *********	FORECAST *********
1	41.074	0.0	4.406	2413.345	6671.520	6671.531
2	44.168	0.0	5.091	1445.444	3052.757	3052.765
3	1.693	0.0	0.237	162.327	1209.616	1209.618
4	5.062	0.0	0.795	-178.498	172.555	172.555
5	49.491	0.0	10.938	2016.035	6267.152	6267.172
6	29.435	0.0	4.522	1392.955	1328.882	1328.887
7	34.909	0.0	5.269	-91.170	1920.159	1920.173
8	0.0	0.0	0.0	-707.591	-658.010	-658.004
9	0.0	0.0	0.0	-756.032	433.353	433.357
10	0.0	0.0	0.0	0.0	221.141	221.141
11	2.404	0.0	0.384	67.346	181.646	181.647
12	165.281	0.0	26.482	-10053.980	-7335.027	-7334.980
13	4.660	0.0	0.693	-118.530	-24.259	-24.258
14	6.443	0.0	1.102	410.619	1402.018	1402.023
15	3.149	0.0	0.505	-55.057	137.956	137.957
16	1.952	0.0	0.295	244.669	589.426	589.427
17	3.496	0.0	0.564	408.387	588.807	588.807
18	1.965	0.0	0.297	250.586	604.992	604.992
19	2.542	0.0	0.381	25.482	260.443	260.444
20	5.479	0.0	0.795	-121.533	530.750	530.750
21	30.420	0.0	4.688	548.717	1570.089	1570.097

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23	5.974	0.0	0.929	107.787	1148.296	1148.298
24	1.414	0.0	0.231	31.157	6.217	6.217
25	23.588	0.0	3.696	701.941	1847.939	1847.954
26	41.761	0.0	6.560	2099.230	4172.723	4172.745
26	8.053	0.0	1.230	-150.613	275.870	275.880
27	45.093	0.0	5.935	3455.620	6924.164	6924.184
28	3.140	0.0	0.488	258.002	366.863	366.863
29	17.070	0.0	2.728	453.035	1476.152	1476.160
30	6.498	0.0	0.997	1233.789	1531.998	1532.004
31	34.406	0.0	5.457	1874.126	2644.274	2644.281
32	10.681	0.0	1.590	506.293	1526.919	1526.923
33	45.820	0.0	7.520	2447.306	5231.496	5231.500
34	30.874	0.0	4.937	3996.517	9412.730	9412.734
35	5.797	0.0	0.928	167.458	327.408	327.409
36	4.164	0.0	0.659	-386.232	-2539.277	-2539.275
37	0.0	0.0	0.0	265.927	583.017	583.017
38	6.265	0.0	1.047	577.608	1349.726	1349.727
39	0.322	0.0	0.055	0.0	849.658	849.658
10	33.180	0.0	5.371	2064.980	3518.284	3518.288

1970 NET WORTH EXTRAPOLATED TO 1980

FIRM	NET WORTH (MILLIONS)
1	1411.519
2	829.821
3	125.029
4	0.0
5	2086.906
6	814.847
7	28.038
8	160.841
9	23.956
10	0.0
11	85.690
12	-320.456
13	5.186
14	227.187
15	42.747
16	74.035
17	89.620
18	126.491
19	43.104
20	411.459
21	650.010
22	131.493
23	0.0
24	474.847
25	800.311
26	-42.263
27	1265.226
28	150.625
29	233.038
30	245.976
31	1195.605
32	184.147
33	1585.780
34	1309.143
35	85.036
36	-41.695
37	92.091
38	224.576
39	0.0
40	1333.351

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NET PRESENT VALUE OF FUTURE CASH FLOW ANALYSIS

FIRM NAME		HISTORICAL AVERAGE (MILLIONS)	BASELINE FORECAST (MILLIONS)	COMPLIANCE FORECAST (MILLIONS)
1	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	1001.845	5260.000	NOT APPLICABLE
1	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	967.177	5225.320	5225.340
1	CHANGE	34.668	34.672	NOT APPLICABLE
2	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	605.623	2222.936	NOT APPLICABLE
2	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	568.345	2185.658	2185.667
2	CHANGE	37.278	37.278	NOT APPLICABLE
3	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	37.298	1164.587	NOT APPLICABLE
3	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	35.842	1163.131	1163.133
3	CHANGE	1.455	1.456	NOT APPLICABLE
4	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-178.498	172.555	NOT APPLICABLE
4	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-182.966	168.287	168.288
4	CHANGE	4.268	4.268	NOT APPLICABLE
5	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-70.078	4100.246	NOT APPLICABLE
5	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-129.425	4121.492	4121.512
5	CHANGE	59.754	59.754	NOT APPLICABLE

D

FIRM NAME		HISTORICAL AVERAGE (MILLIONS)	BASELINE FORECAST (MILLIONS)	COMPLIANCE FORECAST (MILLIONS)
6	NPV OF FUTURE CASH FLOW NO COMPLIANCE	545.109	482.636	NOT APPLICABLE
6	NPV OF FUTURE CASH FLOW WITH COMPLIANCE	521.194	457.121	457.126
6	CHANGE	24.915	24.915	NOT APPLICABLE
7	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-119.208	1892.121	NOT APPLICABLE
7	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-148.929	1862.400	1862.414
7	CHANGE	29.721	29.721	NOT APPLICABLE
8	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-860.432	-818.851	NOT APPLICABLE
8	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-860.432	-818.851	-818.845
8	CHANGE	0.0	0.0	NOT APPLICABLE
9	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-789.989	409.396	NOT APPLICABLE
9	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-789.989	409.396	409.401
9	CHANGE	0.0	0.0	NOT APPLICABLE
10	NPV OF FUTURE CASH FLOW NO COMPLIANCE	0.0	221.141	NOT APPLICABLE
10	NPV OF FUTURE CASH FLOW WITH COMPLIANCE	0.0	221.141	221.141
10	CHANGE	0.0	0.0	NOT APPLICABLE

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NET PRESENT VALUE OF FUTURE CASH FLOW ANALYSIS

****

FIRM NAME		HISTORICAL AVERAGE (MILLIONS)	BASELINE FORECAST (MILLIONS)	COMPLIANCE FORECAST (MILLIONS)
11	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-19.344	94.956	NOT APPLICABLE
11	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-21.363	92.936	92.937
11	CHANGE	2.020	2.020	NOT APPLICABLE
12	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-17733.523	-7014.570	NOT APPLICABLE
12	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-17873.320	-7154.367	-7154.320
12	CHANGE	139.797	139.797	NOT APPLICABLE
13	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-123.717	-29.445	NOT APPLICABLE
13	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-127.683	-33.412	-33.411
13	CHANGE	3.967	3.967	NOT APPLICABLE
14	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	391.411	1175.431	NOT APPLICABLE
14	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	385.871	1170.070	1170.075
14	CHANGE	5.561	5.561	NOT APPLICABLE
15	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-98.804	95.210	NOT APPLICABLE
15	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-101.448	92.566	92.566
15	CHANGE	2.644	2.644	NOT APPLICABLE

NET PRESENT VALUE OF FUTURE CASH FLOW ANALYSIS

****

FIRM NAME		HISTORICAL AVERAGE (MILLIONS)	BASELINE FORECAST (MILLIONS)	COMPLIANCE FORECAST (MILLIONS)
16	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	159.634	515.390	NOT APPLICABLE
16	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	157.977	513.733	513.734
16	CHANGE	1.657	1.657	NOT APPLICABLE
17	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	318.759	499.170	NOT APPLICABLE
17	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	315.826	496.245	496.246
17	CHANGE	2.933	2.933	NOT APPLICABLE
18	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	124.095	470.501	NOT APPLICABLE
18	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	122.427	476.833	476.833
18	CHANGE	1.668	1.668	NOT APPLICABLE
19	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-17.625	217.337	NOT APPLICABLE
19	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-19.785	215.176	215.177
19	CHANGE	2.161	2.161	NOT APPLICABLE
20	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-533.191	119.091	NOT APPLICABLE
20	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-537.075	114.106	114.407
20	CHANGE	4.684	4.685	NOT APPLICABLE

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NET PRESENT VALUE OF FUTURE CASH FLOW ANALYSIS

****

FIRM NAME		HISTORICAL AVERAGE (MILLIONS)	BASELINE FORECAST (MILLIONS)	COMPLIANCE FORECAST (MILLIONS)
21	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-119.301	912.071	NOT APPLICABLE
21	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-145.041	886.331	886.339
21	CHANGE	25.740	25.740	NOT APPLICABLE
22	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	56.094	1016.403	NOT APPLICABLE
22	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	51.048	1011.557	1011.559
22	CHANGE	5.046	5.046	NOT APPLICABLE
23	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	31.157	6.217	NOT APPLICABLE
23	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	29.977	5.037	5.037
23	CHANGE	1.180	1.180	NOT APPLICABLE
24	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	227.097	1393.093	NOT APPLICABLE
24	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	207.405	1373.401	1373.414
24	CHANGE	19.692	19.692	NOT APPLICABLE
25	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	1298.919	5372.410	NOT APPLICABLE
25	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	1263.718	5337.207	5337.230
25	CHANGE	35.201	35.203	NOT APPLICABLE

NET PRESENT VALUE OF FUTURE CASH FLOW ANALYSIS

FIRM NAME		HISTORICAL AVERAGE (MILLIONS)	BASELINE FORECAST (MILLIONS)	COMPLIANCE FORECAST (MILLIONS)
26	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-108.350	318.141	NOT APPLICABLE
26	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-115.173	311.318	311.320
26	CHANGE	6.823	6.823	NOT APPLICABLE
27	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	2390.395	5658.937	NOT APPLICABLE
27	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	2352.236	5620.777	5620.797
27	CHANGE	38.159	38.160	NOT APPLICABLE
28	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	107.377	216.238	NOT APPLICABLE
28	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	104.705	213.565	213.565
28	CHANGE	2.672	2.672	NOT APPLICABLE
29	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	219.997	1243.114	NOT APPLICABLE
29	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	205.655	1228.772	1228.780
29	CHANGE	14.342	14.342	NOT APPLICABLE
30	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	967.812	1266.022	NOT APPLICABLE
30	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	962.311	1260.520	1260.526
30	CHANGE	5.502	5.502	NOT APPLICABLE

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NET PRESENT VALUE OF FUTURE CASH FLOW ANALYSIS
****

FIRM NAME		HISTORICAL AVERAGE (MILLIONS)	BASELINE FORECAST (MILLIONS)	COMPLIANCE FORECAST (MILLIONS)
31	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	470.521	1448.669	NOT APPLICABLE
31	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	449.571	1419.719	1419.726
31	CHANGE	20.950	20.950	NOT APPLICABLE
32	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	402.146	1342.772	NOT APPLICABLE
32	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	393.055	1333.680	1333.685
32	CHANGE	9.091	9.091	NOT APPLICABLE
33	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	891.527	3675.717	NOT APPLICABLE
33	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	853.228	3637.417	3637.427
33	CHANGE	38.299	38.299	NOT APPLICABLE
34	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	2607.374	8023.586	NOT APPLICABLE
34	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	2581.434	7997.645	7997.648
34	CHANGE	25.930	25.941	NOT APPLICABLE
35	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	81.622	241.572	NOT APPLICABLE
35	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	76.754	236.704	236.704
35	CHANGE	4.868	4.868	NOT APPLICABLE

NET PRESENT VALUE OF FUTURE CASH FLOW ANALYSIS
****

FIRM NAME		HISTORICAL AVERAGE (MILLIONS)	BASELINE FORECAST (MILLIONS)	COMPLIANCE FORECAST (MILLIONS)
36	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	-344.537	-2497.582	NOT APPLICABLE
36	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-340.042	-2501.087	-2501.085
36	CHANGE	3.505	3.505	NOT APPLICABLE
37	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	173.032	490.122	NOT APPLICABLE
37	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	173.032	490.122	490.123
37	CHANGE	0.0	0.0	NOT APPLICABLE
38	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	353.012	1125.050	NOT APPLICABLE
38	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	347.794	1119.832	1119.833
38	CHANGE	5.218	5.218	NOT APPLICABLE
39	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	0.0	849.658	NOT APPLICABLE
39	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	-0.267	849.391	849.391
39	CHANGE	0.267	0.267	NOT APPLICABLE
40	NPV OF FUTURE CASH FLOW- NO COMPLIANCE	731.619	2184.923	NOT APPLICABLE
40	NPV OF FUTURE CASH FLOW- WITH COMPLIANCE	703.810	2157.114	2157.118
40	CHANGE	27.809	27.809	NOT APPLICABLE

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RATIO OF NPVFCF / NET WORTH
****

FIRM	HISTORICAL	BASELINE	FORECAST
****	**********	********	********
1	0.69	3.71	3.71
2	0.69	2.64	2.64
3	0.29	9.31	9.31
4	*	*	*
5	-0.06	1.98	1.98
6	0.62	0.54	0.54
7	-5.31	66.43	66.43
10	*	*	*
11	-0.24	1.08	1.08
12	*	*	*
13	-24.61	-6.44	-6.44
14	1.70	5.16	5.16
15	-2.37	2.17	2.17
16	2.14	6.94	6.94
17	3.53	5.54	5.54
18	0.97	3.77	3.77
19	-0.45	5.00	5.00
20	-1.30	0.28	0.28
21	-0.22	1.35	1.35
22	0.39	7.69	7.69
23	*	*	*
24	0.44	2.90	2.90
25	1.58	6.67	6.67
26	*	*	*
27	1.86	4.45	4.45
28	0.70	1.42	1.42
29	0.89	5.28	5.28
30	3.62	4.74	4.74
31	0.55	1.19	1.19
32	2.14	7.25	7.25
33	0.55	2.34	2.34
34	1.86	5.76	5.76
35	0.90	2.76	2.76
36	*	*	*
37	1.87	5.28	5.28
38	1.55	4.99	4.99
39	*	*	*
40	0.53	1.62	1.62

M	[illegible] T
1	49.492
2	53.126
3	2.058
4	6.070
5	83.820
6	35.435
7	42.303
10	0.0
11	2.896
12	199.557
13	5.638
14	7.986
15	3.763
16	2.359
17	4.182
18	2.376
19	3.081
20	6.641
21	36.640
22	7.215
23	1.671
24	28.069
25	50.299
26	9.744
27	54.291
28	3.816
29	20.521
30	7.832
31	41.361
32	12.937
33	54.899
34	37.108
35	4.964
36	5.022
37	0.0
38	7.500
39	0.385
40	39.720
TOTAL	936.773

?

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APPENDIX A

Sample session with $CN.EPAJHV.S2KC.CASHFLOW.

APPENDIX A: Sample Session With Cashflow

The next five pages present two actual sessions with the railroad cashflow model. The sessions begin after telephone contact has been made with the system. Some notes are provided and the user's correct responses are underlined.

In the sample sessions two techniques are demonstrated. These are:

1. Changing the regulatory scenarios.
2. Modifying the key financial parameters.

```
WYL
READY TO WCC ON EA

ILLEGAL TERMINAL TYPE
37
MODEL 37/38 TELETYPE



WYLBUR SYSTEM AT CONNET  PORT 87  WEDNESDAY  12/17/80  2:10:15 P.M.
11/26/80: SCHEDULE OF WCC MIGRATION TO NCC-IBM(REVISED)- SEE NEWS ALERT
12/02/80: ACCESS PROCEDURES FOR NCC-IBM                - SEE NEWS ALERT2
11/17/80: DECEMBER CHANGES AT WCC                      - SEE NEWS ALERT4
USERID  ? EPAJHV
ACCOUNT ? ####
PASSWORD? ########
SPECIFY GLOBAL FORMAT FOR SAVE COMMANDS
REPLY - DEFAULT, EDIT, TSO, CARD, OR PRINT
FORMAT? CARD
                11  1  1  1  1  1
      1          1        1        1        1        1        1

? NOTE: FIRST RUN THE PROGRAM IN ITS ARCHIVAL VERSION
? USE $CN.EPAJHV.S2KC.RUNCASH
? RUN NOTIFY
8470 IS YOUR JOB NUMBER.
? NOTE: SEE IF  8470 IS READY YET

? LOC 8470
JOB 8470 EPAJHVSK EXECUTING A EE68
? NOT READY YET
```

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```
  NOTE!  RUN SCENARIO 5 NOW

? CHANGE 'PVCST1' TO 'PVCST5'
   7.     //GO.FT03F001 DD DSN=CN.EPAJHV.S2KC.PVCST5,DISP=SHR

? CHANGE 'CAST8ONE' TO 'CAST8FIV'
   8.     //GO.FT24F001 DD DSN=CN.EPALYG.S2KC.CAST8FIV,DISP=SHR
? RUN NOTIFY
8474 IS YOUR JOB NUMBER.
? NOTE ! LOG!  OFF UNTIL  JOBS 8470  AND 8474 ARE READY

? CLEAR TEXT
? LOGOFF
END OF SESSION  WEDNESDAY  12/17/80  2!13!57 P.M.

EPAJHV/S2KC OFF WYLBUR 12/17/80 AT 14!13!56, 0.31 WUU
 0.05 CONNECT HRS., 0!00.06 TCB, 0 PAGE-SECONDS
 EXCPS! 10 DA, 0 MT, 28 TERM, 0 OTHER, 38 TOTAL
 CHARGES! $0.00 CONNECT, $0.17 WUU, $0.17 TOTAL
```


NOTE! LOG BACK ON AFTER 5-30 MINUTES TO FETCH JOB OUTPUT. DURING SECOND SESSION, CHANGING THE KEY FINANCIAL PARAMETERS WILL BE DEMONSTATED.

```
WYL
READY TO WCC ON G68

ILLEGAL TERMINAL TYPE
37
MODEL 37/38 TELETYPE



WYLBUR SYSTEM AT COMNET  PORT 139  WEDNESDAY  12/17/80  3:01:09 P.M.
11/26/80: SCHEDULE OF WCC MIGRATION TO NCC-IBM(REVISED)- SEE NEWS ALERT
12/02/80: ACCESS PROCEDURES FOR NCC-IBM                - SEE NEWS ALERT2
11/17/80: DECEMBER CHANGES AT WCC                      - SEE NEWS ALERT4
USERID   ? EPAJHV
ACCOUNT  ? 8888
PASSWORD? 88888888
SPECIFY GLOBAL FORMAT FOR SAVE COMMANDS
REPLY - DEFAULT, EDIT, TSO, CARD, OR PRINT
FORMAT? CARD
          11  1  1  1  1  1
        1      1      1      1      1      1      1
? NOTE: NOW FETCH JOBS RUN BEFORE

? FETCH 8470
? NOTE: OUTPUT READY. NOT LISTED OUT TO SAVE SPACE.

? CLEAR TEXT
? FETCH 8474
? NOTE: 8474 IS SCENARIO FIVE OUTPUT.
```

```
  NOTE: NOW VARY FINANCIAL PARAMETERS
NOTE: ILLEGAL COMMAND
? NOTE:      . . DISCOUNT RATE


? USE $CN.EPAJHV.S2KC.MISCEDIT
  CLEAR ? YES
? LIST 4
   4.      .11
? NOTE: DISCOUNT RATE AT 11%

? NOTE: INCREASE TO 20%

? REPLACE 4
   4.    ? .20
? SAVE $CN.EPAJHV.S2KC.MISCEDIT CARD
"MISCEDIT" ALREADY EXISTS ON USER63
REPLACE? YES
"MISCEDIT" REPLACED ON USER63
? USE $CN.EPAJHV.S2KC.RUNCASH
  CLEAR ? YES
? RUN NOTIFY
8781 IS YOUR JOB NUMBER.
? NOTE: IF THIS WERE A REAL SESSION, ONE WOULD LOG OFF NOW

? AND RETURN TO FETCH THE OUTPUT OF  JOB 8781

? INSTEAD, THE RESTORATION OF THE KEY FINANCIAL PARAMETERS FILE

? (MISCEDIT) TO ITS ARCHIVAL VALUES WILL BE DEMONSTARTED
```

```
  USE $CN.EPAJHV.S2KC.MISC
  CLEAR ? YES

? SAVE $CN.EPAJHV.S2KC.MISCEDIT
FORMAT FOR SAVE? CARD


'MISCEDIT' REPLACED ON USER63

? NOTE: NOW MISCEDIT HAS BEEN RESTORED TO ITS ARCHIVAL FORM.

? NOTE: UNDER NORMAL CIRCUMSTANCES, THE USER MUST' WAIT

? UNTIL AFTER A PROGRAM HAS RUN TO
? RESTORE MISCEDIT  TO ITS ARCHIVAL FORM.

? CLEAR TEXT
? LOGOFF
END OF SESSION  WEDNESDAY  12/17/80  3:12:40 P.M.

EPAJHV/S2KC OFF WYLBUR 12/17/80 AT 15:12:40, 1.27 WUU
 0.19 CONNECT HRS., 0:00.30 TCB, 0 PAGE-SECONDS
 EXCPS: 43 DA, 0 MT, 92 TERM, 0 OTHER, 135 TOTAL
 CHARGES: $0.00 CONNECT, $0.71 WUU, $0.71 TOTAL
```

APPENDIX B: KEY COMMANDS

APPENDIX B: KEY COMMANDS

Knowledge of certain key commands will make using the railroad cash flow model much easier. A list of these key commands is presented here. Essential parts of the command are underlined, optional parts are not. A more complete description of all available commands may be found in the WYLBUR Guide.

Key Commands

USE FILENAME	Brings file into users workspace.
ex. USE SCN.EPAJHV.S2KC.MISC	
LIST LINE NO./LINE NO. CC UNN	Lists contents of a user's workspace; if line numbers are specified, lists only the contents of the first number through the last number; if CC is specified, uses the first character of the line as a FORTRAN carriage control; if UNN is specified prints file without line numbers.
ex. LIST 4/10 CC UNN	
REPLACE LINE NUMBER	Causes current contents of specified line to be erased. Computer then prints line number and prompts user to input new contents of line.
ex. REPLACE 7	

CHANGE 'XXX' TO 'YYY' IN LINE NUMBER/LINE NUMBER	Changes occurrences of XXX to YYY in file; if line numbers are specified changes are made only in first line through second line.
ex. CHANGE 'PVCST1' TO 'PVCST5' in 2/9	
RUN NOTIFY	Submits contents of user's workspace as a job.
SAVE FILENAME CARD ON USER NO.	Saves contents of user's workspace as a file with given name in 80 character format in storage area with given number.
ex. SAVE $CN.EPAJHV.S2KC.MISC CARD ON USER63	
FETCH JOB NO.	Brings contents of job into user's workspace.
ex. FETCH 1163	
SET TERMINAL WIDTH = 132	Programs computer to use full width of terminal while printing (132 characters). Necessary to properly print output of CASHFLOW.

APPENDIX C: RESTORING THE CASH FLOW SOFTWARE TO ON-LINE STORAGE

APPENDIX C: RESTORING THE CASH FLOW SOFTWARE TO ON-LINE STORAGE

After a period of 2 months during which a file is not used, WCC transfers the file from on-line storage to a tape in its archives. The file must be transferred back on line in order to use it. A user will know that the file he/she is attempting to use has been archived if:

1. The computer responds:

   VOLUME:?

   to a request to "USE" a file in which the filename has been specified properly.

2. The computer responds:

   JOB XXX ENDED AT DEFAULT. JCL ERROR

   after one has been run RUNCASH on job XXXX. This response means that a file has been archived only if the command to run was specified properly and is actually in the workspace.

In order to de-archive a file type:

LOAD $SYS3.GO(DEARC) <CR>

and then type:

GO <CR>

Directions will be printed in which the computer instructs the user to type the names of the files he/she wishes to de-archive. At this point, the user should de-archive all the cash flow model files. These are:

```
CN.EPAJHV.S2KC.RUNCASH
CN.EPAJHV.S2KC.CASHFLOW
CN.EPAJHV.S2KC.MISCEDIT
CN.EPAJHV.S2KC.MISC
CN.EPAJHV.S2KC.BASE
CN.EPAJHV.S2KC.GNPDEF
CN.EPAJHV.S2KC.PVCST1
CN.EPAJHV.S2KC.PVCST2
CN.EPAJHV.S2KC.PVCST3
CN.EPAJHV.S2KC.PVCST4
CN.EPAJHV.S2KC.PVCST5
CN.EPAJHV.S2KC.PVCST6
CN.EPAJHV.S2KC.PVCST7
CN.EPAJHV.S2KC.PVCST8
CN.EPALYG.S2KC.CAST8ONE
CN.EPALYG.S2KC.CAST8TWO
CN.EPALYG.S2KC.CAST8THR
CN.EPALYG.S2KC.CAST8FOU
CN.EPALYG.S2KC.CAST8FIV
CN.EPALYG.S2KC.CAST8SIX
CN.EPALYG.S2KC.CAST8SEV
CN.EPALYG.S2KC.CAST8EIG
CN.EPALYG.S2KC.YDINV
```

Input of filenames is terminated by hitting the BREAK or ATTENTION key.

De-archiving usually takes one or two days. At the end of this time, the cash flow software may be used normally.

APPENDIX D:

ERRATA SHEETS

1. Add the following section above the first paragraph on page 2-1.

2.1 Introduction

2.1.1 Reason for Model

The EPA is directed to promulgate railroad yard noise standards by Public Law 92-574, the Noise Control Act. By Executive Order, it is required to evaluate the economic impact of proposed standards. During the development of the railroad yard noise standards, a computerized model of firm cash flows was developed to aid in the economic impact analysis. This document explains how to use this cash flow model.

2.1.2 User Profile

The model is intended for use by an economic impact analyst. No particular user expertise is needed to run the Cash-Flow model. However, a basic familiarity with computers would be helpful, and familiarity with FORTRAN IV and IBM's Job Control Language (JCL) would be especially helpful. The user should also have some experience with data processing in a batch mode. It is recommended that the user read a copy of the WYLBUR Guide, which is available from the EPA's National Computer Center. WYLBUR is the operating system the program has been run in.

2. Delete the first seven sentences of the first paragraph on page 1-2. These sentences begin with "This volume of" and end with: "Section 2.4 is a sample output." Replace these sentences with:

2.1.3 User Guide Organization

Section 2.2 provides an overview of the cash flow model and its computing environment. Section 2.3 describes how to access the model and run it. Section 2.4 shows how to change the data. Section 2.5 is a sample output.

3. Change the subsection numbered 2.1 on page 2-1 to 2.2.

4. Delete the first two sentences of the second paragraph on page 2-1. Replace these sentences with the following section. The last sentence of this section will become the first sentence of the existing paragraph.

The cash flow model is resident in the Environmental Protection Agency's Washington Computer Center (WCC). Because it is written in standard FORTRAN IV Level G1, it can be compiled and run on any minicomputer or mainframe with a FORTRAN compiler. At WCC, the computers it has been run on are a IBM 370/168 Model 1 with six million bytes of main memory and an IBM 3032 with six million bytes of main memory. This sytem has both the Time Sharing Option (TSO) and WYLBUR operating system. The model has only been run using the WYLBUR system. Therefore, this User's Guide is oriented toward operating the model through WYLBUR.

In WYLBUR one can edit files at the terminal in an interactive mode.

5. Change the section heading 2.2 on page 2-3 to 2.3.

6. Insert the following paragraph above the first paragraph on page 2-3:

The model will be used by a limited group: those intending to assess the economic impacts of railyard noise regulations. The model also contains no confidential information or data. Therefore, no security procedures have been implemented for accessing or using the model and its data.

7. Change the section headings 2.3, 2.3.1, and 2.3.2 on pages 2-8, 2-9 and 2-13 to 2.4, 2.4.1 and 2.4.2 respectively.

8. Change the section heading 2.4 on page 2-17 to 2.5.